

CLAIMS

1. A merging apparatus comprising:
a housing;
a plurality of linked moveable merging bins, mounted
5 on the housing, for receiving sorted items, each merging
bin corresponding to a location in a sort sequence to
which items in the sort sequence are addressed;
data input means for entering, in relation to an item
that is to be merged with the sorted items, address data
10 describing a location in the sort sequence;
control means, connected to the data input means for
moving the linked moveable merging bins according to the
address data entered into the data input means,
wherein the control means is operable, when address
15 data is entered into the data input means, to move the
merging bin corresponding to the location in the sort
sequence given by the address data to an input position in
which the item that is to be merged can be inserted into
the merging bin.
- 20 2. A merging apparatus according to claim 1 wherein the
housing comprises a conveyor, and wherein the merging bins
are comprised of a plurality of slats mounted on the
conveyor.
- 25 3. A merging apparatus according to claim 2 wherein the
conveyor has a convex curved portion, and wherein the
input position is located at the curved portion such that
the slats of the merging bin are caused to fan out.

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4. A merging apparatus according to claim 2, further comprising guide means positioned above the merging bins and above the input position, the guide means having an input end for receiving the item that is to be merged, and
5 an output end through which the item to be merged can pass into the merging bin at the input position.

5. A merging apparatus according to claims 2 to 4 comprising:

10 a plurality of sorting bins for receiving sorted items from a sequencing apparatus, each sorting bin corresponding to a location in a sort sequence to which items in the sort sequence are addressed;

mechanical output means for outputting sorted items from a sorting bin to a merging bin;

15 wherein the control means is operable to align one or more of the linked moveable merging bins and the sorting bins with each other, such that a merging bin and a sorting bin corresponding to the same location in the sort sequence are aligned, and the output means can output the
20 sorted items for that location from the sorting bin to the merging bin.

6. A merging apparatus according to claim 5 wherein the output means comprises a push-plate mounted in each sorting bin, and wherein the merging bins are adjacent the
25 sorting bins, the control means controlling the push-plate and the moveable merging bins such that when at least one of the merging bins is brought into alignment with a corresponding sorting bin, the push-plate can push the sorted items from the sorting bin to the corresponding
30 merging bin.

7. A merging apparatus according to claim 6 wherein if a number of adjacent merging bins are allocated to the same

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location in the sort sequence, the control means moves the merging bin corresponding to the sorting bin which last received mail for that address to the input position.

8. A merging apparatus according to any preceding claim
5 comprising means for outputting the items contained in the merging bins which correspond to a location in the sort sequence and for wrapping them into a single package.

9. A method of merging items into a pre-sorted series of items, comprising the steps of:
10 receiving information defining a sort sequence;
allocating to each location in the sort sequence a merging bin in a series of linked moveable merging bins, the merging bin being for receiving sorted items addressed to the location in the sort sequence which is allocated to
15 the merging bin;
receiving data defining a location in the sort sequence into which an item is to be merged; and
moving the merging bin corresponding to a location in the sort sequence at which an item is to be merged to an
20 input position in which the item to be merged can be input into the merging bin.

10. A method according to claim 9 comprising:
sorting items into sorting bins according to the address in the sort sequence to which the item is
25 addressed;
positioning at least one merging bin such that items in the sorting bin addressed to the location to which the merging bin is allocated can be output from the sorting bin to the merging bin.

30 11. A method according to claim 9 or 10, wherein if a number of adjacent merging bins are allocated to the same

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location in the sort sequence, the control means moves the merging bin corresponding to the sorting bin which last received mail for that address to the input position.

12. A method according to any of claims 9 to 11
5 comprising the steps of outputting the items contained in the merging bins which correspond to a location in the sort sequence and wrapping them into a single package.

13. A method according to claims 9 to 12 comprising the
10 steps of moving to the input position the merging bin which is nearest to the input position and which corresponds to a location at which an item is to be merged, and indicating the address of the location in the sort sequence corresponding to that merging bin.